

FFFFFFF	000000000	RRRRRRRRRRR	RRRRRRRRRRR	TTTTTTTTTTTTT	LLL
FFFFF	000000000	RRRRRRRRRRR	RRRRRRRRRRR	TTTTTTTTTTTTT	LLL
FFFFF	000000000	RRRRRRRRRRR	RRRRRRRRRRR	TTTTTTTTTTTTT	LLL
FFF	000	000	RRR	RRR	TTT
FFF	000	000	RRR	RRR	TTT
FFF	000	000	RRR	RRR	TTT
FFF	000	000	RRR	RRR	TTT
FFF	000	000	RRR	RRR	TTT
FFF	000	000	RRR	RRR	TTT
FFF	000	000	RRR	RRR	TTT
FFF	000	000	RRR	RRR	TTT
FFF	000	000	RRR	RRR	TTT
FFF	000	000	RRR	RRR	TTT
FFF	000	000	RRR	RRR	TTT
FFF	000	000	RRR	RRR	TTT
FFF	000	000	RRR	RRR	TTT
FFF	000	000	RRR	RRR	TTT
FFF	000	000	RRR	RRR	TTT
FFF	000	000	RRR	RRR	TTT
FFF	000	000	RRR	RRR	TTT
FFF	000	000	RRR	RRR	TTT
FFF	000	000	RRR	RRR	TTT
FFF	000	000	RRR	RRR	TTT
FFF	000	000	RRR	RRR	TTT
FFF	000	000	RRR	RRR	TTT
FFF	000000000	RRR	RRR	RRR	LLLLLLLLLLLL
FFF	000000000	RRR	RRR	RRR	LLLLLLLLLLLL
FFF	000000000	RRR	RRR	RRR	LLLLLLLLLLLL

FILEID**FORINIUND

81

FF FFFFFFFF 000000 RRRRRRRR IIIIII NN NN IIIIII UU UU NN NN DDDDDDDD
FF FFFFFFFF 000000 RRRRRRRR IIIIII NN NN IIIIII UU UU NN NN DDDDDDDD
FF 00 00 RR RR II NN NN II UU UU NN DD DD
FF 00 00 RR RR II NN NN II UU UU NN DD DD
FF 00 00 RR RR II NNNN NN II UU UU NNNN NN DD DD
FF 00 00 RR RR II NNNN NN II UU UU NNNN NN DD DD
FF FFFFFF 00 00 RRRRRRRR III NN NN NN III UU UU NN NN DD DD
FF FFFF 00 00 RRRRRRRR III NN NN NN III UU UU NN NN DD DD
FF 00 00 RR RR II NN NNNN II UU UU NN NNNN DD DD
FF 00 00 RR RR II NN NNNN II UU UU NN NNNN DD DD
FF 00 00 RR RR II NN NN II UU UU NN NN DD DD
FF 00 00 RR RR II NN NN II UU UU NN NN DD DD
FF 000000 RR RR IIIIII NN NN IIIIII UUUUUUUUUU NN NN DDDDDDDD
FF 000000 RR RR IIIIII NN NN IIIIII UUUUUUUUUU NN NN DDDDDDDD

```
1 0001 0 XTITLE 'FOR$INIUND - Initialize Fortran underflow handling'  
2 0002 0 MODULE FOR$INIUND (  
3 0003 0           IDENT = '1-001'          ! File: FORINIUND.B32 Edit: JAW1001  
4 0004 0           ) =  
5 0005 1 BEGIN  
6 0006 1 ++  
7 0007 1 *****  
8 0008 1 *  
9 0009 1 *  
10 0010 1 * COPYRIGHT (c) 1978, 1980, 1982, 1984 BY  
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27 0027 1 *  
28 0028 1 *  
29 0029 1 *****  
30 0030 1 *  
31 0031 1 *  
32 0032 1 FACILITY: Fortran Support Library  
33 0033 1 *  
34 0034 1 ABSTRACT:  
35 0035 1 *  
36 0036 1 * This module contains a condition handler for floating underflow  
37 0037 1 * exceptions, an exit handler to report the number of underflows  
38 0038 1 * at image exit, and an initialization procedure which establishes  
39 0039 1 * the condition handler for Fortran main programs.  
40 0040 1 *  
41 0041 1 ENVIRONMENT: Runs at any access mode - AST reentrant  
42 0042 1 *  
43 0043 1 AUTHOR: John A. Wheeler, CREATION DATE: 21-Aug-1981  
44 0044 1 *  
45 0045 1 MODIFIED BY:  
46 0046 1 *  
47 0047 1 1-001 - Original. JAW 21-Aug-1981  
48 0048 1 --  
49 0049 1 *
```

```
51      0050 1 %SBTTL 'Declarations'  
52      0051 1  
53      0052 1 | SWITCHES:  
54      0053 1 |  
55      0054 1 |  
56      0055 1 | SWITCHES ADDRESSING_MODE (EXTERNAL = GENERAL, NONEXTERNAL = WORD_RELATIVE);  
57      0056 1 |  
58      0057 1 |  
59      0058 1 | LINKAGES:  
60      0059 1 |  
61      0060 1 |     NONE  
62      0061 1 |  
63      0062 1 | TABLE OF CONTENTS:  
64      0063 1 |  
65      0064 1 |  
66      0065 1 | FORWARD ROUTINE  
67          FOR$INIT_UNDER;  
68      0066 1 |  
69      0067 1 |  
70      0068 1 |  
71      0069 1 | INCLUDE FILES:  
72      0070 1 |  
73      0071 1 |  
74      0072 1 | REQUIRE 'RTLIN:RTLPSECT';  
75      0167 1 |  
76      0168 1 |  
77      0169 1 | MACROS:  
78      0170 1 |  
79      0171 1 |     NONE  
80      0172 1 |  
81      0173 1 | EQUATED SYMBOLS:  
82      0174 1 |  
83      0175 1 |     NONE  
84      0176 1 |  
85      0177 1 | FIELDS:  
86      0178 1 |  
87      0179 1 |     NONE  
88      0180 1 |  
89      0181 1 | PSECTS:  
90      0182 1 |  
91      0183 1 |  
92      0184 1 | PSECT  
93          PLIT = LIB$INITIALIZD ( READ, NOWRITE, NOEXECUTE, NOSHARE, NOPIC,  
94          CONCATENATE, GLOBAL, ALIGN (2), ADDRESSING_MODE (GENERAL) );  
95      0185 1 |  
96      0186 1 |  
97      0187 1 |  
98      0188 1 |+  
99      0189 1 | Make LIB$INITIALIZD psect contribution so LIB$INITIALIZE procedure  
100     0190 1 | will call FOR$INIT_UNDER, which will establish FOR$UNDERFLOW HANDLER  
101     0191 1 | as default handler and make coroutine call back. LIB$INITIALIZD is  
102     0192 1 | used so that FOR$INIT_UNDER will be called before COM_STARTUP, whose  
103     0193 1 | address is in LIB$INITIALIZE psect.  
104     0194 1 |-  
105     0195 1 |  
106     0196 1 | BIND  
107     0197 1 |     VECT = UPLIT (FOR$INIT_UNDER);  
108     0198 1 |  
109     0199 1 |+  
110    0200 1 | Now declare usual PSECTS
```

FOR\$INIUND
1-001

FOR\$INIUND - Initialize Fortran underflow handl E 1
Declarations 16-Sep-1984 00:26:58
14-Sep-1984 12:32:01

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[FORRTL.SRC]FORINIUND.B32;1

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(2)

```
108      0201 1 !-
109      0202 1
110      0203 1 DECLARE_PSECTS (FOR);
111      0204 1                                ! Declare PSECTs for FOR$ facility
112      0205 1
113      0206 1 OWN STORAGE:
114      0207 1
115      0208 1 NONE
116      0209 1
117      0210 1 EXTERNAL REFERENCES:
118      0211 1
119      0212 1
120      0213 1 EXTERNAL ROUTINE
121      0214 1     LIB$INITIALIZE,
122      0215 1     FOR$UNDERFLOW_HANDLER;
123      0216 1
124      0217 1 !
```

```
126      0218 1 %SBTTL 'FOR$INIT_UNDER - Initialize underflow handling'  
127      0219 1 GLOBAL ROUTINE FOR$INIT_UNDER (  
128      0220 1     CO_ROUT_INIT,  
129      0221 1     CLT_CO_ROUT  
130      0222 1 ) =  
131      0223 1  
132      0224 1 ++  
133      0225 1 FUNCTIONAL DESCRIPTION:  
134      0226 1  
135      0227 1 This routine is called by LIB$INITIALIZE during image startup.  
136      0228 1 It establishes FOR$UNDERFLOW_HANDLER as a default underflow  
137      0229 1 exception handler and makes a coroutine call back to LIB$INITIALIZE.  
138      0230 1  
139      0231 1 CALLING SEQUENCE:  
140      0232 1  
141      0233 1     ret_status.wlc.v = FOR$INIT_UNDER (co_rout_init.ra.v  
142      0234 1             cli_co_rout.ra.v)  
143      0235 1  
144      0236 1 FORMAL PARAMETERS:  
145      0237 1  
146      0238 1     co_rout_init          Address of coroutine within  
147      0239 1  
148      0240 1     cli_co_rout          Address of coroutine within CLI  
149      0241 1  
150      0242 1  
151      0243 1  
152      0244 1 IMPLICIT INPUTS:  
153      0245 1  
154      0246 1     NONE  
155      0247 1  
156      0248 1 IMPLICIT OUTPUTS:  
157      0249 1  
158      0250 1     NONE  
159      0251 1  
160      0252 1 COMPLETION STATUS: (or ROUTINE VALUE:)  
161      0253 1  
162      0254 1     As returned by main program via LIB$INITIALIZE.  
163      0255 1  
164      0256 1 SIDE EFFECTS:  
165      0257 1  
166      0258 1     Makes a coroutine call back to LIB$INITIALIZE, thereby leaving  
167      0259 1     the current frame on the stack.  
168      0260 1  
169      0261 1 --  
170      0262 1  
171      0263 2 BEGIN  
172      0264 2  
173      0265 2     ENABLE  
174      0266 2     FOR$UNDERFLOW_HANDLER;  
175      0267 2  
176      0268 2  
177      0269 2     !+  
178      0270 2     ! Make coroutine call back to LIB$INITIALIZE.  
179      0271 2     !-  
180      0272 2     RETURN (.CO_ROUT_INIT) ();  
181      0273 2  
182      0274 1 END;           ! End of routine FOR$INIT_UNDER
```

FOR\$INIUND
1-001

G 1
FOR\$INIUND - Initialize Fortran underflow handl 16-Sep-1984 00:26:58
FOR\$INIT_UNDER - Initialize underflow handling 14-Sep-1984 12:32:01

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[FORRTL.SRC]FORINIUND.B32;1

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(3)

:
.TITLE FOR\$INIUND FOR\$INIUND - Initialize Fortran unde
rflow handl
.IDENT \1-001\
.PSECT LIB\$INITIALIZD_,NOWRT,NOEXE, GBL,2
00000000' 00000 P.AAA: .ADDRESS FOR\$INIT_UNDER

:
VECT= P.AAA
.EXTRN LIB\$INITIALIZE, FOR\$UNDERFLOW_HANDLER

:
.PSECT _FOR\$CODE,NOWRT, SHR, PIC,2

04 6D BC 0006 0000000G 00 04	CF DE 00002 00 FB 00007 04 0000B 0000 0000C 1\$: 7E D4 0000E 5E DD 00010 AC 7D 00012 03 FB 00016 04 0001D	<p>.ENTRY FOR\$INIT_UNDER, Save nothing MOVAL 1\$, (FP) CALLS #0, ACO_ROUT_INIT RET</p> <p>.WORD Save nothing CLRL -(SP) PUSHL SP MOVQ 4(AP), -(SP) CALLS #3, FOR\$UNDERFLOW_HANDLER RET</p>	: 0219 : 0263 : 0272 : 0274 : 0263
------------------------------	--	--	--

: Routine Size: 30 bytes, Routine Base: _FOR\$CODE + 0000

: 183 0275 1
: 184 0276 1 END
: 185 0277 0 ELUDOM

: ! End of module FOR\$INIUND

PSECT SUMMARY

Name	Bytes	Attributes
LIB\$INITIALIZD_ _FOR\$CODE	4 30	NOVEC,NOWRT, RD ,NOEXE,NOSHR, GBL, REL, CON,NOPIC,ALIGN(2) NOVEC,NOWRT, RD , EXE, SHR, LCL, REL, CON, PIC,ALIGN(2)

COMMAND QUALIFIERS

: BLISS/CHECK=(FIELD,INITIAL,OPTIMIZE)/NOTRACE/LIS=LIS\$:FORINIUND/OBJ=OBJ\$:FORINIUND MSRC\$:FORINIUND/UPDATE=(ENH\$:FORINIUND
)

: Size: 30 code + 4 data bytes

FOR\$INIUND
1-001

FOR\$INIUND - Initialize Fortran underflow handl 16-Sep-1984 00:26:58 H 1
FOR\$INIT_UNDER - Initialize underflow handling

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: Run Time: 00:02.0
: Elapsed Time: 00:07.4
: Lines/CPU Min: 8436
: Lexemes/CPU-Min: 18761
: Memory Used: 17 pages
: Compilation Complete

0181 AH-BT13A-SE
VAX/VMS V4.0

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